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Service quality and its effects on consumer outcomes: a meta-analytic review in spectator sport

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ABSTRACT

Research question: Previous research on service quality in spectator sport has provided mixed results on its measurement and influence on spectators' outcomes. This study synthesises previous empirical research in a meta-analytic framework to provide a comprehensive understanding of service quality measurement, its effects on spectators' perceived value, satisfaction and behavioural intentions, while also exploring culture and sport setting as moderators.

Research methods: This meta-analysis is based on a comprehensive search of peer-reviewed articles. It integrates 121 effect sizes based on 139,796 participants from 121 independent studies that were examined through a meta-analytic structural equation model.

Results and findings: The results indicated that the dimensions of functional and aesthetic quality had a moderate effect on perceived value and a small effect on both satisfaction and behavioural intentions. Core product quality showed a moderate influence on satisfaction but did not influence neither perceived value nor behavioural intentions. Both perceived value and satisfaction were significantly related to behavioural intentions. Culture and sport setting partially moderated the relationships between service quality and spectator outcomes (perceived value, satisfaction and behavioural intentions towards the teams).



Implications: This meta-analysis aggregates a range of attributes derived from previous studies in a comprehensive model and provides a succinct overview of the differential role of service quality dimensions on spectators' perceived value, satisfaction and behavioural intentions. It offers a roadmap for planning service delivery in spectator sport that contributes to recalibrate future directions for research and practice.

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Introduction

Spectator sport is a popular leisure activity in contemporary societies attracting millions of individuals to stadiums and generating significant revenues for sport teams (Deloitte, 2020). The top five European football leagues attracted more than 52 million spectators in the 2016/2017 season (EPFL, 2018). Also, the global spectator sport market was valued at €234 billion in 2017 (Cision, 2018), and the gate revenues for the US market were projected to be €18.4 billion in 2020 (PwC, 2016). Due to this wide popularity, the delivery of high service quality is paramount in the management of spectator sport (Yoshida, 2017). Previous studies have frequently associated quality service delivery to positive spectator outcomes such as increased perceived value, satisfaction and behavioural intentions towards the teams (e.g. Moreno et al., 2015; Theodorakis et al., 2013).

Nevertheless, although there is an agreement among researchers that service quality has a multidimensional nature, its conceptualisation has not been unanimous. A variety of scales using attributes and/or dimensions of service quality have been proposed (e.g. Biscaia et al., 2013; Ko et al., 2011; Theodorakis et al., 2001). However, the existent conceptual disparities make it difficult to understand how to properly assess service quality in spectator sport. In addition, there are contradictory results regarding the effect of service quality on spectator outcomes. For example, Moreno et al. (2015) noted that overall service quality is an antecedent of perceived value, whereas Byon et al. (2013) reported that perceived value was only predicted by the attributes of home team and venue quality. Yoshida and James (2010) observed that stadium employees were important to increase service satisfaction, while Biscaia et al. (2013) reported that spectators' satisfaction was not influenced by their perceptions of employee performance. In another example, Theodorakis and Alexandris (2008) noted that security did not affect spectators' intentions to attend future games, even though Biscaia et al. (2013) reported this service quality attribute to be an important predictor of behavioural intentions.

All these relationships rise from different definitions and theoretical lens' providing incongruent findings about the importance of service quality in spectator sport and ambiguous conclusions on how to properly manage the delivery of sport experiences. Also, the context often shapes consumer experiences (Horbel et al., 2016). Reactions to sport services are suggested to vary across cultures and sport settings (Kim et al., 2019), but the moderator role of these variables in the relationship between service quality and spectator outcomes is yet to be understood. To address these gaps, a meta-analysis of the literature is important to both managers and researchers for a variety of reasons. First, there were no past efforts to combine research findings in the service quality literature related to spectator sport. A meta-analysis allows empirical integration of a range of constructs derived from different theoretical perspectives, evaluation of published materials (Combs et al., 2019), and development of an integrated model leading to a more unified comprehensive understanding of the importance of service quality for spectators. Second, individual studies commonly examine only a narrow range of spectator outcomes (e.g. Byon et al., 2013; Tsuji et al., 2007). The aggregation of empirical findings across individual studies through a meta-analysis provides a better overview of service quality dimensions that drive different spectator outcomes. Third, previous studies revealed variations in the significance and magnitude of the

relationships between service quality, perceived value, satisfaction and behavioural intentions (e.g. Moreno et al., 2015; Yoshida & James, 2010). Meta-analytic evidence can elucidate discrepancies in past studies and assess the generalisability of such relationships (Hogreve et al., 2017; Kim et al., 2015). Furthermore, prior research has rarely integrated moderators when examining the effect of service quality on spectator outcomes. Through data available from prior studies, a meta-analysis can explore boundary conditions (Hulland & Houston, 2020) to better understand relationships between service quality, perceived value, satisfaction and behavioural intentions, and guide future research.

Due to the limitations noted above and the increased competitiveness for sport organisations to attract new consumers and nurture existent relationships (Ko et al., 2011), the purposes of the current study are to (1) systematically review and analyse the literature in a meta-analytic framework to provide a comprehensive understanding on how to measure service quality in spectator sport, (2) clarify the relationships between service quality dimensions, perceived value, satisfaction and behavioural intentions, and (3) test the moderating role of culture and sport setting in these relationships. The remainder of the text is organised as follows. First, we provide the study's theoretical background and present the hypotheses. Second, the method and empirical findings are described. Finally, we conclude with a discussion of the findings, implications, limitations and future research directions.

Theoretical background and hypotheses

Service quality refers to a consumer's global judgement of the excellence of the service provided by an organisation (Zeithaml & Bitner, 2003). Its conceptualisation in spectator sport has been traditionally guided by two different schools of thought. One is derived from the SERVQUAL model (Parasuraman et al., 1988), which includes five dimensions (tangibles, reliability, responsiveness, assurance and empathy) based on the gap theory (i.e. expectations vs. perceptions of the service) and has guided studies such as McDonald et al. (1995). The other is driven by the two-dimensional model of functional and technical quality proposed by Grönroos (1984), which was adapted by Theodorakis et al. (2013) to spectator sport. Advances to these two research lines were then provided by Brady and Cronin (2001) through a conceptual model capturing the dimensions of interaction, physical environment and outcome quality that is driven by a performance-only approach and was also adapted to spectator sport (e.g. Clemes et al., 2011). All these approaches were important to set the ground for functional and technical quality in spectator sport, but none captures the highly hedonic nature of the sport spectator experience (Funk & James, 2001).

Despite different conceptualisations, there is a consensus that the examination of service quality and its consequences is vital to understand how sport organisations can nurture relationships with fans and maintain a competitive edge within the marketplace (Biscaia et al., 2013). Scholars have noted that service quality drives spectators' value perceptions of sport events (e.g. Moreno et al., 2015) because value depends on the simultaneous evaluations of the core product and ancillary services in relation to the costs. Sport teams provide a variety of peripheral services to compensate the unpredictable nature of the core product (Yoshida, 2017). Also, spectator satisfaction and behavioural intentions towards the teams have been consistently reported as key outcomes of service

quality (e.g. Shonk et al., 2017). That is, satisfaction is inherently backward-looking and requires service experience (Wolter et al., 2017), and behavioural intentions are often dependent on service environment perceptions (Uhrich & Benkenstein, 2012). The appendix shows examples of service quality studies and associated spectator outcomes highlighting the continued interest of this topic in the literature.

In reviewing the literature, many inconsistencies and/or theoretical misrepresentations were identified. These include, for example, the use of different labels to measure the same service quality attribute (e.g. parking vs. stadium access: both capturing how easy and secure it is to park cars at sport events; Clemes et al., 2011; Shonk et al., 2017), different service quality attributes being measured under the same label (e.g. amenities used to capture entertainment activities during events, Byon et al., 2013; but also perceptions of toilets, access, food and beverages; Clemes et al., 2011), broad labels measuring different attributes into the same service quality dimension (e.g. venue quality including diverse aspects such as cleanliness, layout, price of merchandise, food quality, and even spectator-staff relationships; Tzetzis et al., 2014). The application of a theory's proposition through service quality attributes (e.g. home team or security; Biscaia et al., 2013) and overall dimensions (e.g. outcome and functional quality; Theodorakis et al., 2013) also adds controversy to the role of service quality on spectator outcomes. Furthermore, we identified studies using service quality and satisfaction interchangeably or inappropriately (e.g. mixed measures of service quality and satisfaction; Yen et al., 2012). Additional issues were related to inappropriate measures of attendance behaviours. That is, despite claims of measuring in-season attendance, previous studies often include past behaviours (i.e. should not be outcome variables of event experience; Kuenzel & Yassim, 2010), intentions to attend future games (i.e. behavioural intentions; Foroughi et al., 2014), or did not examine actual behaviours in relation to service quality (Yoshida et al., 2015).

Given the continuing interest in service quality in spectator sport, theoretical misconceptions and mixed findings about its role on spectator outcomes, a meta-analytic framework is important to allow reflection on existent knowledge and recalibrate directions for practice and research. Based on a critical review of the literature (e.g. Byon et al., 2013; Yoshida & James, 2011), we use single dimension definitions (Table 1) to code existing research. Rather than attributes that are often context-specific, the framework is based on service quality dimensions because of its potential for conceptual generalisations. For example, food and beverage or parking facilities are attributes not always available, but the functional quality dimension is part of any event.

The current meta-analytic framework is illustrated in Figure 1 and follows a performance-only approach (Brady & Cronin, 2001), because consumers use their perceptions of service performance when evaluating service quality, and performance-based measures have shown to better discriminate quality from satisfaction (Brady et al., 2002) and avoid measurement redundancy (Carrillat et al., 2007). The framework depicts the relationships between the three dimensions of service quality (core product, functional and aesthetic) and the most frequently examined outcome variables: perceived value, satisfaction, and behavioural intentions. The selection and nomological placement of each construct in the framework is driven by both theory and its frequency in extant research. The theoretical rationale for the conceptualisation and proposed relationships are presented below.

Table 1. Overview of the meta-analytic framework.

Variable	Definition	Representative studies	Example attributes
Service quality			
Core product quality	A consumer's judgement about the overall excellence or superiority of sport-related attributes.	Byon et al. (2013) and Foroughi et al., (2016)	Teams (Biscaia et al., 2017); Player performance (Yoshida & James, 2011); Game performance (Kim et al., 2013); Team characteristics (Foroughi et al., 2016); Game quality (Foroughi et al., 2014); Opponent characteristics (Yoshida & James, 2011); Home team (Byon et al., 2013); Outcome quality (Theodorakis et al., 2013).
Functional quality	A consumer's perception of the excellence of the utilitarian service attributes including the interactions between the consumer, frontline employees, and facility functions.	Theodorakis et al. (2013) and Yoshida and James (2011)	Facility space, seat space (Yoshida & James, 2010, 2011); Staff (Greenwell et al., 2002); Frontline employees, facility access (Biscaia et al., 2013); Cleanliness (Fernandes & Neves, 2014); Food and beverage (Clemes et al., 2011); Parking (Shonk et al., 2017); Ticket service, Venue quality (Byon et al., 2013).
Aesthetic quality	A consumer's perception of the hedonic attributes of the service environment and promotional activities that create an entertaining and visually appealing stadium ambiance.	Biscaia et al. (2013) and Yoshida and James (2011)	Ambiance (Shonk et al., 2017); Crowd experience (Biscaia et al., 2013); Environment (Ko et al., 2011); Event atmosphere (Biscaia et al., 2017); Auditory (Kuenzel & Yassim, 2010); Game amenities (Byon et al., 2013); Physical surrounding (Kim et al., 2013); Visuals and sounds, matchday entertainment (Clemes et al., 2011).
Outcomes			
Perceived value	A consumer's assessment of the event based on the trade-off between what is received (quality) and what is given up (money, time, and effort).	Cronin et al. (2000) and Moreno et al. (2015)	Perceived value (Byon et al., 2013); Utilitarian value (Biscaia et al., 2017); Hedonic value, Symbolic value (Yoshida et al., 2013).
Overall satisfaction	A consumer's pleasurable, fulfillment response to the entertainment of sport competition and ancillary services provided at sporting events over the season.	Tsuji et al. (2007) and Theodorakis et al. (2001)	Game satisfaction, Service satisfaction (Yoshida & James, 2010); Overall satisfaction (Theodorakis et al., 2001); Satisfaction with servicescape (Fernandes & Neves, 2014).
Behavioural intentions	A consumer's willingness to perform a diverse set of positive behaviours including the intentions to recommend the team to others, attend the team's future sporting events, and remain loyal to the team.	Byon et al. (2013) and Biscaia et al. (2013)	Revisit intentions (Kim et al., 2013); Intentions to attend future games (Byon et al., 2013); Intentions to recommend games to others (Clemes et al., 2011); Remaining loyal to the team (Yoshida & James, 2010).
Moderators			
Sport setting	Whether consumers attended professional sports (e.g. NBA) or non-professional sports (e.g. American college sports).	Baker and Jones (2011) and Kim et al. (2019)	NA
Culture	Whether consumers attended the sport in a Western cultural context (e.g. United States, Europe) or Eastern cultural context (e.g. Japan, South Korea)	Kim et al. (2019) and Ma and Kaplanidou (2020)	NA

Note: NA, not applicable.

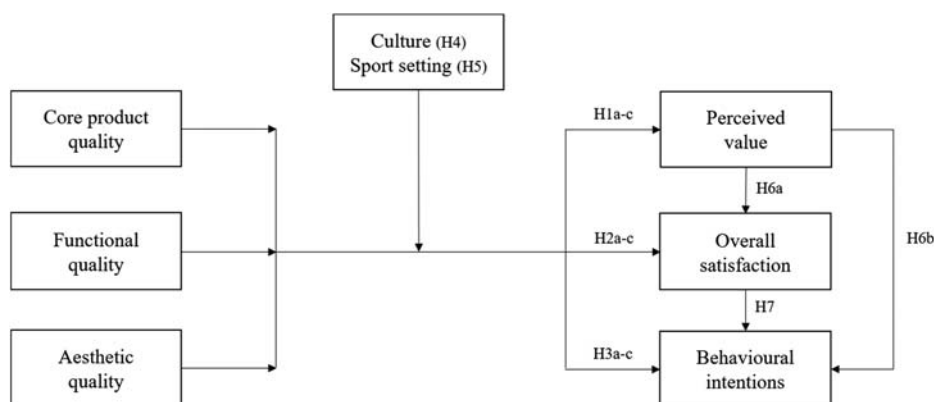


Figure 1. Meta-analytic framework for service quality and its consequences.

Dimensions of service quality

Service quality is conceptualised into three dimensions: core product quality, functional quality and aesthetic quality. Justification for these dimensions is provided by previous research arguing that (1) spectator sport products can be first classified into the core product and ancillary services (Byon et al., 2013), and (2) ancillary services can then be further categorised into functional and aesthetic services depending on their utilitarian and hedonic nature (Yoshida & James, 2011). Although some researchers have applied Brady and Cronin's (2001) multidimensional model (interaction, environmental, outcome quality) to the realm of spectator sport (e.g. Clemes et al., 2011), we argue that the three dimensions of core product, functional and aesthetic quality are preferable because: (1) service environments contain utilitarian and hedonic characteristics (Okada, 2005) and the distinction of these features is neglected in Brady and Cronin's (2001) model; (2) the purpose of this study is to consolidate previous fragmented and ambiguous findings in a sport-specific model which should distinguish the utilitarian and hedonic aspects of spectator service quality.

The hedonic side of consumption involves aesthetic aspects (Hoyer & Stokburger-Sauer, 2012). Spectator sport has a highly hedonic nature given the consumption is often driven by motives such as enjoyment, escape, and excitement (Funk & James, 2001). This means that the event's aesthetically appealing features should be incorporated in the conceptualisation of service quality in spectator sport (Yoshida & James, 2011). Furthermore, both utilitarian and hedonic aspects contribute to consumption choices (Patrick & Peracchio, 2010). Therefore, in addition to the core versus ancillary distinction, the functional and aesthetic aspects of service quality are deemed appropriate and necessary to reflect the hedonic-value dominant setting of spectator sport.

The definitions and example attributes of the three service quality dimensions are presented in Table 1. Core product quality is evaluated during the sport encounter which involves spectators' interactions with a sport competition in which the performance of athletes or teams is evaluated or scored to determine the winner(s) in an unpredictable manner (Yoshida, 2017). In turn, during sport events, consumers interact with frontline employees (e.g. ticket sellers and concession clerks) and facility functions (e.g. seat space,

layout accessibility, ticket service and information signs). These are utilitarian aspects that represent extrinsic means to an end (Dhar & Wertenbroch, 2000) and are captured through the functional dimension of service quality. The third dimension, aesthetic quality, is associated with an aesthetically appealing theme, design, and atmosphere at the facilities (Biscaia et al., 2013), which relates more to service appearance, entertainment and affective gratification (Iyer et al., 2020; Voss et al., 2003). Both functional and aesthetic quality components are delivered to consumers as complementary parts of core product quality (Cronin et al., 2000; Ribeiro et al., 2018).

Consequences of service quality

Researchers have consistently examined three outcome variables in service quality research: perceived value, consumer satisfaction, and behavioural intentions (Table 1). First, perceived value is one of the most influential constructs to understand spectator decisions (Byon et al., 2013). Based on cue utilisation theory (Richardson et al., 1994), spectators use various cues from core product quality to peripheral service quality (i.e. both functional and aesthetic attributes) to evaluate the overall value of stadium experiences. Consistent with this view, scholars have suggested that the measurement of perceived value depends on the context (e.g. Babin et al., 1994). Therefore, for the current study, we contend that spectators' positive evaluations of each service quality dimension benefit their perceived value of sport events. Against this backdrop, we expect that:

H1: Spectators' perceptions of (a) core product, (b) functional and (c) aesthetic quality have a direct positive effect on perceived value.

The second outcome of service quality is consumer satisfaction, which can be assessed through transaction-specific measures (i.e. specific to a service encounter) or at an overall level (i.e. cumulative evaluation of all encounters over time; Jones & Suh, 2000). Transaction-specific satisfaction is useful to understand the variability in service delivery, while overall satisfaction is more relevant for understanding the continued relationships between consumers and organisations (Bodet & Bernache-Assollant, 2011). To this end, we focus on overall satisfaction to understand spectators' response to sport events over the season (Biscaia et al., 2012). Consumer satisfaction theory (Cronin & Taylor, 1992; Oliver, 1997) argues that satisfaction reflects individuals' overall feelings derived from the perceived quality of the core product and ancillary services. Also, attribution theory (Bitner, 1990) posits that consumers make judgments about quality-satisfaction relationships based on their experiences with the service provider. These theories together imply that spectators' overall satisfaction is a function of various service quality dimensions at sport events. Accordingly, we expect that good quality perceptions of each service quality dimension will lead to increased satisfaction levels. Therefore:

H2: Spectators' perceptions of (a) core product, (b) functional and (c) aesthetic quality have a direct positive effect on overall satisfaction.

Behavioural intentions have also emerged in the literature as a frequent outcome measure. A behavioural intention represents a measure on how much a person is

willing to engage in a particular behaviour (Ajzen, 2001), and its examination in spectator sport is vital to understand if the relationship spectator-team will continue in the future and generate more revenues (Yoshida & James, 2010). Researchers have found that specific service quality dimensions have a direct effect on behavioural intentions (e.g. Tsuji et al., 2007). The underlying rationale for these effects is rooted in means-end chain theory that suggests consumers consider their favourable service quality evaluations (e.g. superior player performance and stadium atmosphere) as a means to achieving their desired consequences such as a strong and continued commitment to their teams (Gutman, 1982; Zeithaml, 1988). Thus, we hypothesise that:

H3: Spectators' perceptions of (a) core product, (b) functional and (c) aesthetic quality have a direct positive effect on behavioural intentions.

Moderators of service quality effects

Guided by prior literature and data availability (Iyer et al., 2020), we seek novel insights on the effects of service quality dimensions on spectator outcomes by exploring the sport setting and culture as potential moderators. Based on our systematic review, the degree (stronger/weaker) and direction (positive/negative) of the moderating effects of culture and sport setting on the links between service quality and its outcomes remain theoretically underdeveloped. Because of the exploratory nature of moderator analyses in service quality research, we attempt to examine how culture and sport setting influence the proposed structural relationships.

Understanding the role of culture in service quality management is pivotal, because a country's culture often shapes individuals' perceptions and behaviours (Samaha et al., 2014). The culture moderator in our framework is guided by previous research on consumer cultural differences (e.g. Anderson et al., 2010) and accounts for variation in spectator attendance at sport events in Western and Eastern cultures (see Table 1). Building on Hofstede's (2001) framework, Zhang et al. (2014) noted that research with Western cultures (i.e. individualistic) does not always translate into Eastern cultures (i.e. collectivistic) and vice-versa. That is, consumers in Western cultures tend to focus more on personal preferences while in Eastern cultures collectivistic appeals are generally favoured. Also, recent research in spectator sport suggests that the role of service quality on spectator outcomes can vary according to country's culture (Ma & Kaplanidou, 2020). Thus, we argue that:

H4: The effect of service quality dimensions on spectators' outcomes varies in Western and Eastern cultures.

Previous studies have also suggested that the effect of service quality on consumer behavioural intentions varies across sports (Jang et al., 2020) and that consumers evaluate experiences in non-professional and professional sports differently (Kim et al., 2019). These ideas are echoed by Woratschek et al. (2020) highlighting that each sport setting has unique characteristics that likely influence value creation, customer satisfaction and loyalty. Against this backdrop, we hypothesise that:

H5: The effect of service quality dimensions on spectators' outcomes varies in professional and non-professional sport.

Relationships between outcome variables

The proposed framework also implies relationships between perceived value, satisfaction and behavioural intentions. Insights derived from attitude theory (Eagly & Chaiken, 1993) constitute the theoretical foundation for the proposed effects of perceived value on satisfaction and behavioural intentions. Following this theory, a consumer's belief about a service experience affects his/her overall evaluations of that service and subsequent intentions. For example, the more positive beliefs consumers have about a sport event's value, the more positive evaluations (e.g. satisfaction) and subsequent intentions (e.g. willingness to attend future games) they have about their stadium experiences. Based on this rationale and previous empirical research (e.g. Byon et al., 2013), we propose that:

H6: Spectators' perceived value has a direct positive effect on (a) overall satisfaction and (b) behavioural intentions.

Previous studies have also suggested a relationship between spectator satisfaction and positive behavioural intentions (e.g. Fernandes & Neves, 2014). The rationale underlying these studies is provided by Oliver's (1999) consumer loyalty theory suggesting that once individual satisfaction episodes are aggregated as cumulative satisfaction, this global (long-term) judgement affects both consumers' conative (intention) and behavioural loyalty. Thus, the following hypothesis is proposed:

H7: Spectators' overall satisfaction has a positive effect on behavioural intentions.

Method

Collection and coding of studies

The literature search included multiple sources and methods. First, a comprehensive search of peer-reviewed articles published until October 2020 was conducted in computerised databases including ABI/INFORM (ProQuest), EBSCO (Academic Search Complete, Business Source Complete, Hospitality and Tourism Index and SPORTDiscus), ScienceDirect, JSTOR, and Google Scholar. The search included various combinations of the following terms: service quality, value, satisfaction, behavioural intentions, loyalty, sportscape, spectator sport(s), sport(ing) events, experience, stadium environment, spectators and game. Second, additional peer-reviewed articles were identified through manual cross-referencing of bibliographies cited in previous manuscripts (Hogreve et al., 2017). Third, manual searches on management journals that often contain research on service quality in sport (e.g. Journal of Business Research, The Services Industries Journal, Journal of Retailing, Psychology & Marketing) were conducted. Fourth, unpublished doctoral dissertations were located via ProQuest Dissertations and Thesis. Fifth, we searched conference papers on the websites and conference proceedings available from sport management and marketing conferences (i.e. EASM, NASSM, SMAANZ and SMA). We also contacted service quality researchers whenever their work was not available online to obtain their publications (Palmatier et al., 2006).

Titles, abstracts and references of potential articles to be included in our meta-analysis were firstly reviewed by one of the authors and then by the other research team members

(Kim et al., 2019). At this stage, 311 manuscripts were selected. We then retrieved the full texts of the selected articles for evaluating the eligibility leading to the inclusion of 179 studies. Decisions to include or exclude studies in the meta-analysis were made by consensus and the eligibility criteria included: (1) only studies written in English; (2) quantitative studies measuring service quality in spectators sport and/or including variables that fit the definitions in the meta-analytic framework (Table 1); (3) studies examining at least one of the spectator outcomes in the meta-analytic framework; (4) both published and unpublished studies (e.g. doctoral thesis) to avoid publication bias (i.e. effect sizes may be inflated if based solely on published sources; Kim et al., 2015). In turn, duplicate entries and studies with the same sample (e.g. conference paper and journal article) were removed to avoid the bias of a duplicate study effect. Subsequently, additional 58 records were excluded due to theoretical misconceptions. For example, studies that used a mixed measure of service quality and satisfaction (e.g. satisfaction with quality, quality based on performance-minus-expectation) or measurement items not consistent with the definitions in the meta-analytic framework. Further methods to prevent publication bias included the classic fail-safe N, Orwin's (1983) fail-safe N, funnel plot, and trim and fill as detailed in the statistical methods section below (Kim et al., 2019). After this screening process, a total of 121 studies met the criteria for inclusion in the meta-analysis.

Coding procedures

A coding form was developed to specify the relevant information about the studies to be included in the meta-analysis. It included information about study details (authors, year of publication, title, abstract, journal, computerised database), study design, culture (Western vs. Eastern), sport setting (professional vs. non-professional sports), participants and sample size, measures capturing service quality and outcome variables, homogeneous sets of variables (how variables were combined in the meta-analytic framework), and statistical analyses (techniques, outcomes, correlations and effect sizes). The coding was completed by all researchers of this study. The initial intercoder agreement was over 90%, and discrepancies to classify model variables were discussed until a consensus was reached among all coders by using definitions in Table 1. For studies that reported multiple effect size estimates of the same relationship, we used the average to avoid statistical interdependence. When studies reported an independent effect size estimate for each of the multiple relationships, we treated them as separate effect size estimates for the meta-analysis (Kim et al., 2015). Ultimately, we combined 121 effect sizes based on 139,796 participants from 121 independent studies in the current meta-analysis.

Statistical methods

The correlation coefficient r was the effect size metric chosen for the analysis because it is dimensionless, easily interpretable and commonly used for meta-analytic reviews (e.g. Hogueve et al., 2017). For studies reporting different statistics (e.g. χ^2 , t , d or F), we converted them to

$r \left(r = \sqrt{\frac{\chi^2}{n}}, = \frac{t^2}{t^2 + df_e}, = \frac{d}{\sqrt{d^2 + a}}, d = \pm \sqrt{\frac{F(n_1 + n_2)}{n_1 n_2}} \right)$. The

varying sample sizes of the selected studies were taken into consideration by integrating the correlations using inverse variance weight. Also, we used a random effects model to test the overall effect sizes across studies, which is recommended when the true effect size varies due to participants and research setting differences (Cooper et al., 2009). The 95% confidence intervals around the estimated correlations were also reported in addition to the point estimate of effect size.

To examine moderations, we used a mixed-effects model including random effects within subgroups and fixed-effects across subgroups. The Cochran's (1954) *Q*-statistic was performed to examine the relative homogeneity of an effect (distributed as a chi-square with $k-1$ degrees of freedom). Additionally, *Q* tests that divide the total variance into variance within and between groups and test the portion of the variance between subgroups were assessed (Anderson et al., 2010). Comparisons of the subgroups were performed when three or more study effects at each level of moderators were available (Kim et al., 2015).

Following Rosenthal and DiMatteo (2001), multiple methods were used to estimate potential publication bias. First, we calculated the fail-safe *N* (i.e. number of missing studies with effect sizes of zero needed to produce an overall, nonsignificant effect size). Orwin's (1983) fail-safe *N* was then estimated to check how many missing studies would bring the overall effect sizes down to a trivial value other than zero. Subsequently, a funnel plot was created to compare the effect sizes from individual studies against measures of precision (e.g. inverse of the standard error). When publication bias is not present, the funnel plot is roughly symmetrical about the mean effect size because sampling error is random. Finally, trim and fill procedures were employed (non-parametric, iterative data augmentation technique; Kim et al., 2015). This allows to estimate the adjusted effect sizes (i.e. unbiased estimates) by removing the smaller studies causing the funnel plot asymmetry and re-calculating the effect size at each iteration until the shape funnel plot is symmetrical. A significant difference between the observed effect size and adjusted effect size could indicate selection bias.

Subsequently, a meta-analytic structural equation model (MASEM) was performed to test the nomological relationships in Figure 1. This multivariate technique not only allows to analyse all relationships simultaneously, but also requires significantly more data. That is, for a construct to be included, the effects (i.e. correlation coefficients) between the construct and all others in the model must be available and not just the pairwise effects (Palmatier et al., 2006). Following Borenstein et al. (2009), three or more studies in each cell of the input correlation matrix were considered for the inclusion of a construct in the MASEM. As the correlations in each cell are based on different sample sizes, we specified harmonic mean of the correlations' total sample size as the sample for MASEM. The error variance was also fixed to zero because measurement error corrections had been accomplished through the pairwise analysis (Kim et al., 2015).

Results

Pairwise analysis

The results of the pairwise meta-analysis integrated the effect sizes of the samples from the 121 independent studies. Table 2 shows the integration of effect sizes results for the

Table 2. Pairwise meta-analysis results.

	<i>K</i>	<i>N</i>	Simple Average <i>r</i>	Sample weighted adjusted Average <i>r</i>	95% CI		Fail- safe <i>N</i>	Orwin's fail safe <i>N</i>	<i>Q</i> (df)
					<i>LL</i>	<i>UL</i>			
<i>Perceived value</i>									
Core product quality	9	9306	.27	.25	.15	.34	1350	19	166.29(8)
Functional quality	8	3538	.46	.46	.38	.54	1656	30	65.32(7)
Aesthetic quality	10	6855	.52	.55	.43	.64	4761	42	290.62(9)
<i>Satisfaction</i>									
Core product quality	19	23,505	.42	.45	.39	.50	8874	82	432.04(19)
Functional quality	10	17,118	.40	.41	.35	.47	5716	37	139.83(9)
Aesthetic quality	15	19,531	.43	.44	.39	.49	10,013	49	224.61(14)
Perceived value	7	2810	.46	.50	.30	.66	1729	37	260.22(6)
<i>Behavioural intentions</i>									
Core product quality	20	8666	.28	.29	.18	.40	4148	45	573.93(19)
Functional quality	12	4785	.22	.22	.15	.30	709	15	81.67(11)
Aesthetic quality	24	8692	.37	.39	.30	.48	8216	66	570.89(23)
Perceived value	8	3148	.40	.43	.25	.57	1409	31	222.61(7)
Satisfaction	18	6685	.57	.59	.50	.67	2704	100	413.64(17)
<i>Core product quality</i>									
Functional quality	9	10,262	.31	.32	.20	.44	1527	17	229.06(8)
Aesthetic quality	18	7414	.40	.42	.32	.51	6803	66	421.24(17)
<i>Functional quality</i>									
Aesthetic quality	18	7481	.46	.47	.43	.51	8457	72	84.21(17)

proposed pairwise relationships, and the confidence intervals that do not include zero indicate significant changes. The three service quality dimensions showed a significant influence on perceived value (PV). The highest impact was from aesthetic quality (AQ: $r = .55$; 95% CI = .43–.64; $p < .001$), which can be considered a large effect (Cohen, 1988). Both functional quality (FQ: $r = .46$; 95% CI = .38–.54; $p < .001$) and core product quality (CPQ: $r = .25$; 95% CI = .15–.34; $p < .001$) had a significant influence on PV with these values indicating medium effects. It is important to note that none of these results appear to be subject to publication bias, given that the fail-safe *N* values indicate that 1350 to 4761 additional missing studies need to exist for the correlations to be nonsignificant at the .05 level. All *Q*-statistic tests for homogeneity were significant (from 65.32, df = 7 to 290.62, df = 9) providing support to take a random effects perspective.

A positive relation of the three service quality dimensions with satisfaction (SAT) was also observed. CPQ ($r = .45$; 95% CI = .39–.50; $p < .001$), FQ ($r = .41$; 95% CI = .35–.47; $p < .001$) and AQ ($r = .44$; 95% CI = .39–.49; $p < .001$) were all significant and showed a medium effect on SAT (Cohen, 1988). Similarly, PV showed a significant relationship

with SAT ($r = .50$; 95% CI = .30–.66; $p < .01$). The fail-safe N values were between 5716 and 10013 for service quality, and 1729 for perceived value suggesting that the effect sizes are not subject to publication bias. Furthermore, all Q -statistic tests for homogeneity were significant.

The three service quality dimensions were all related to behavioural intentions (BI). Despite aesthetic quality had the highest relationship, all service quality dimensions showed a medium effect according to Cohen's (1988) classification (CPQ: $r = .29$; 95% CI = .18–.40; $p < .001$; FQ: $r = .22$; 95% CI = .15–.30; $p < .001$; AQ: $r = .39$; 95% CI = .30–.48; $p < .001$). The fail-safe N values range from 709 to 8216 indicating no issues related to publication bias, while Q -statistics were significant supporting the random effects perspective. In addition, both SAT ($r = .59$; 95% CI = .50–.67; $p < .001$) and PV ($r = .43$; 95% CI = .25–.57; $p < .001$) had a significant relationship with BI. The fail-safe N values were 1409 (PV) and 2704 (SAT) and Q -statistics were both significant.

Moderator analyses

The significant moderator effects of culture (Eastern vs. Western) and sport setting (professional vs. non-professional) on the relationships between service quality and the three spectator outcomes (PV, SAT and BI) are presented in Table 3. Following Kim et al. (2015), studies that could not be categorised into subgroups from the comparisons (i.e. less than three effects at each level of moderators available) were dropped. The moderator role of culture on the relationships between service quality dimensions and PV was only significant for AQ, with the effect being significantly larger in Eastern cultures ($r\Delta = .10$, $Q_B = 18.25$, $p < .001$). Similarly, only the relationship between AQ and SAT ($r\Delta = .09$, $Q_B = 11.89$, $p < .001$) was significantly moderated by culture. However, in this case, the effect was greater in Western culture. On the other hand, the influence of CPQ ($r\Delta = .13$, $Q_B = 32.24$, $p < .001$) and AQ ($r\Delta = .16$, $Q_B = 63.88$, $p < .001$) on BI were significantly stronger in Eastern than Western cultural contexts. Culture did not significantly moderate the effect of FQ on spectator outcomes. Therefore, H4 was only partially supported. When exploring the moderator role of sport setting, only two service quality dimensions showed a significant different effect on spectator outcomes. CPQ had a significantly larger effect on SAT in professional than in non-professional sport ($r\Delta = .16$, $Q_B = 40.73$, $p < .001$). Contrarily, CPQ had a significantly larger effect on BI in non-professional sport ($r\Delta = .32$, $Q_B = 163.46$, $p < .001$). In addition, AQ had significantly larger impacts on BI in professional sport ($r\Delta = .09$, $Q_B = 13.16$, $p < .001$). Thus, H5 was also only partially supported.

Table 3. Relationships significantly moderated by sport setting and culture.

Relationships	Raw effects	Moderators		Q_B
Aesthetic quality → Perceived value	10	Western (.46)	Eastern (.56)	18.25*
Aesthetic quality → Satisfaction	15	Western (.40)	Eastern (.31)	11.89*
Core product quality → Behavioural intentions	20	Western (.35)	Eastern (.22)	32.24*
Aesthetic quality → Behavioural intentions	24	Western (.42)	Eastern (.26)	63.88*
Core product quality → Satisfaction	19	Professional (.49)	Non-professional (.33)	40.73*
Core product quality → Behavioural intentions	20	Professional (.26)	Non-professional (.58)	163.46*
Aesthetic quality → Behavioural intentions	24	Professional (.37)	Non-professional (.28)	13.16*

* $p < .001$.

MASEM analysis

The correlation matrix computed from all available studies was used in the MASEM (Table 4) given that the measurement or scales of the variables often vary across studies (Hunter & Schmidt, 2004). The harmonic mean of the sample sizes for the analysis was 5460 providing enough statistical power to access the model fit and identify the significance of path coefficients.

The model fit the data perfectly because it was saturated ($\chi^2(0) = 0.00$; GFI = 1.00; CFI = 1.00; RMSEA = 0.00) and accounted for 35% of the variance in PV ($R^2 = .35$), 38% in SAT ($R^2 = .38$) and 39% in BI ($R^2 = .39$). As shown in Table 5, with exception of the paths from CPQ to PV and BI, all path coefficients in the model were significant ($p < .001$). CPQ, which had a significant association with PV in the pairwise analysis, revealed to have no significant impact when controlling for FQ and AQ in the model ($\gamma = -.02$, 95% CI = $-.04-.01$, $p = .156$). Therefore, H1a was not supported. In turn, both FQ ($\gamma = .26$; 95% CI = $.24-.28$; $p < .001$) and AQ ($\gamma = .43$; 95% CI = $.41-.46$; $p < .001$) showed significant impacts on PV supporting H1b and H1c.

CPQ ($\gamma = .30$, 95% CI = $.27-.32$, $p < .001$), FQ ($\gamma = .13$; 95% CI = $.11-.15$; $p < .001$), and AQ ($\gamma = .08$; 95% CI = $.05-.10$; $p < .001$) had direct positive effects (moderate to weak) on SAT after controlling for the other service quality predictors and PV. Thus, H2a-c were supported. Neither H3a nor H3b were supported because the direct impact of CPQ ($\gamma = .02$; 95% CI = $-.01-.04$; $p = .148$) on BI was not significant, and FQ ($\gamma = -.12$; 95% CI = $-.14-.10$; $p < .001$) showed a marginal negative effect after accounting for the effect of PV and SAT. In turn, AQ ($\gamma = .10$; 95% CI = $.08-.13$; $p < .001$) showed a marginal positive effect on BI supporting H3c.

PV was a significant predictor of SAT ($\beta = .32$; 95% CI = $.30-.35$; $p < .001$), while also showing a small but positive effect on BI ($\beta = .17$; 95% CI = $.15-.20$, $p < .001$) after controlling for satisfaction. Therefore, H6a and H6b were supported. These results suggest that PV and SAT indirectly accounted for a large portion of all service quality dimensions' influence on BI. Finally, the path from SAT to BI was significant in the expected

Table 4. Correlation matrix for the MASEM.

Variables	1	2	3	4	5	6
<i>Core product quality</i>	1.00					
Studies (N)	–					
Total observations (N)	–					
<i>Functional quality</i>	.32	1.00				
Studies (N)	9	–				
Total observations (N)	10,262	–				
<i>Aesthetic quality</i>	.42	.47	1.00			
Studies (N)	18	18	–			
Total observations (N)	7414	7481	–			
<i>Perceived value</i>	.25	.46	.55	1.00		
Studies (N)	9	8	10	–		
Total observations	9306	3538	6855	–		
<i>Satisfaction</i>	.42	.41	.43	.50	1.00	
Studies (N)	19	10	15	7	–	
Total observations (N)	23,505	17,118	19,531	2810	–	
<i>Behavioural intentions</i>	.29	.22	.39	.43	.59	1.00
Studies (N)	20	12	24	8	18	–
Total observations (N)	8666	4785	8692	3148	6685	–

direction ($\beta = .50$; 95% CI = .47–.52; $p < .001$) and indicating a medium-high effect; thus, H7 was supported.

Discussion

The current study examined a meta-analytic framework aimed at providing a comprehensive understanding on how to measure service quality in spectator sport and clarifying the relationships between service quality dimensions, perceived value, satisfaction and behavioural intentions. Given that no previous meta-analysis of service quality in spectator sport has been conducted, this study contributes to the literature by reconciling past empirical findings into an integrative model that offers a more precise understanding of the role and magnitude of service quality dimensions (core product, functional and aesthetic) on spectator outcomes, allowing a reflection on future directions for research and practice.

The results of this meta-analytic study indicate that functional and aesthetic quality are the two drivers of spectator value perceptions, reinforcing the idea that social and physical elements of hedonic consumption experiences are important for value creation (Jones et al., 2019). As value is created in context (Tsotsou, 2016), the sportscape should be carefully managed (Wakefield & Blodgett, 2016) meaning that spectators' interactions with frontline employees (e.g. concession clerks) and facility functions (e.g. seat space, layout accessibility), as well as the sport organisation induced-ambiance (e.g. visuals and sounds, supplementary entertainment) and the interaction with other spectators (e.g. crowd experience), are important aspects for value creation in spectator sport. It is also worth noting that aesthetic quality has a stronger impact on perceived value in Eastern cultures, which may be related to the fact Eastern consumers are often less tolerant to service uncertainty (Hofstede, 2001) and rely more on cost-benefit evaluations (perceived value) when assessing aesthetic quality (e.g. organisation- and spectator-induced stimuli).

On the other hand, core product quality did not show a predictive role on perceived value, contrasting with previous studies suggesting that on-field cues are central for spectator perceptions of event value (e.g. Biscaia et al., 2017). Although some researchers have suggested that core product quality positively influences perceived value, most findings

Table 5. Summary of the MASEM.

Paths	Estimates	SE	<i>p</i>	95% CI	
				LL	UL
Core product quality → Perceived value	-.02	.01	.156	-.04	.01
Functional quality → Perceived value	.26	.01	<.001	.24	.28
Aesthetic quality → Perceived value	.43	.01	<.001	.41	.46
Core product quality → Satisfaction	.30	.01	<.001	.27	.32
Functional quality → Satisfaction	.13	.01	<.001	.11	.15
Aesthetic quality → Satisfaction	.08	.01	<.001	.05	.10
Core product quality → Behavioural intentions	.02	.01	.148	-.01	.04
Functional quality → Behavioural intentions	-.12	.01	<.001	-.14	-.10
Aesthetic quality → Behavioural intentions	.10	.01	<.001	.08	.13
Perceived value → Satisfaction	.32	.01	<.001	.30	.35
Perceived value → Behavioural intentions	.17	.01	<.001	.15	.20
Satisfaction → Behavioural intentions	.50	.01	<.001	.48	.52

were produced based on data from fans of popular, successful and major sport teams (e.g. Byon et al., 2013; Clemes et al., 2011). In the current study, we integrated the findings of 121 studies with data from spectators of various non-major sport events, teams and athletes (e.g. badminton, dance, college football). Therefore, one way to explain the non-significant impact of core product quality is by considering the variable (unstable) quality of the core product that involves different sport settings as well as successful and unsuccessful athletes or teams. Also, this finding aligns with prior research that found the impact of core product-related attributes on brand benefits was much weaker than that of non-product-related attributes among spectators of eighteen German professional football teams (Bauer et al., 2008). Furthermore, the inclusion of new variables in a model may influence the predictive effects of each variable (Wood et al., 2008), and previous studies with a narrow range of spectator outcomes do not allow a comprehensive overview of the importance of service quality (Biscaia et al., 2017; Tsuji et al., 2007). Thus, this meta-analysis extends previous literature by providing evidence that consumer value perceptions in spectator sport are driven by service quality dimensions that are more controllable by managers (functional and aesthetic) rather than the uncontrollable aspects of the service delivery (core product).

The MASEM showed that all three service quality dimensions had a positive effect on spectator satisfaction, with core product quality being the strongest predictor. Nevertheless, the path coefficient indicates moderate importance, while functional and aesthetic dimensions exhibit a small effect (Cohen, 1988). These findings suggest that sport-related attributes (e.g. team performance) represent the main source of spectator satisfaction (Koenig-Lewis et al., 2018), and allow to elucidate discrepancies in past research by providing empirical evidence supporting a holistic approach to service delivery (Yoshida, 2017). That is, if spectators do not have good perceptions of the functional and aesthetic dimensions of the service, the core product will only play a modest role at increasing satisfaction. In addition, perceived value also showed a positive (moderate) impact on spectator satisfaction suggesting the event evaluation partially depends on the trade-off between the benefits and costs of the live experience (Moreno et al., 2015). Taken together, these results indicate that overall satisfaction (i.e. cumulative evaluation of experiences) is mainly influenced by a direct effect of core product quality and an indirect effect of functional and aesthetic quality dimensions via increased value perceptions. Indeed, if the on-field performance was the only important aspect for spectators, teams like the German Borussia Dortmund (only one championship title in the last decade) could never be globally recognised for constantly selling out stadium capacity and maintaining high levels of fan satisfaction (Bundesliga, 2018). As satisfaction represents a measure of organisational performance (Wolter et al., 2017), sport teams should adopt a consumer-oriented approach to promote the experiential nature of the event, avoid dependence on the ups-and-downs of on-field performance and increase the value of stadium experiences.

Another important finding from this meta-analytic study relates to the role of service quality dimensions on spectators' behavioural intentions. Core product quality did not affect behavioural intentions directly, while functional and aesthetic quality dimensions were directly related through opposite and marginal effects. These findings help clarify contrasting evidence in extant literature (Biscaia et al., 2013; Theodorakis et al., 2013), and indicate that favourable evaluations of service quality in itself are not enough for

increasing spectators' willingness to attend future games, recommend them to others and remain loyal to the team. The moderator analyses further indicate that the effects of both core product and aesthetic quality on behavioural intentions are larger in Western cultures, while in non-professional sport core product quality has a stronger effect on behavioural intentions. These findings suggest that people in Western cultures are more likely to consume spectator sport for hedonic reasons, as opposed to individuals in Eastern cultures who often evaluate services more holistically (Lee et al., [in press](#)). Also, supplementary entertainment services seem important to increase the desire to continuously consume spectator sport in professional settings, whereas on-field performance can be regarded as the primary driver of continued attendance in non-professional settings.

In turn, spectators' perceived value shows a small effect on behavioural intentions and satisfaction is the strongest predictor. This means that good perceptions of core product quality likely favour spectators' behavioural intentions via their satisfaction, while the effects of functional and aesthetic quality are noted mainly via enhanced event value perceptions. These results suggest a key role of satisfaction and value perceptions to mediate the relationship between service quality and behavioural intentions; thus, supporting the idea that satisfaction and perceived value in spectator sport are influenced by consumer judgements of different service cues (Cronin & Taylor, [1992](#)) and lead to conative loyalty (Oliver, [1999](#)). Our findings provide theoretical support for two types of relationships: (1) outcome-based relationship between core product quality and consumer satisfaction and (2) process-based relationships between functional quality, aesthetic quality and perceived value.

It is also worth noting that spectators' perception of a given service quality dimension affects the other dimensions ([Table 2](#)). For example, when managers invest in improving aesthetic quality (e.g. supplementary entertainment), this may lead to increased perceptions of functional quality (e.g. venue quality, frontline employees) and vice-versa. Sport teams should consider the service experience as a journey comprising multiple points of interaction (Funk, [2017](#)) that drives spectators' value perceptions, satisfaction and continued relationships with their teams. Furthermore, service quality is complex and merely aggregating prior findings is insufficient (Combs et al., [2019](#)). In the current meta-analysis, we tested a conceptualisation of service quality based on core product, functional and aesthetic quality dimensions that captured a variety of cues used by spectators to assess event experiences, and provide a succinct overview of the importance of service quality on spectators' outcomes aiming to advance theoretical knowledge and guide managerial practices.

Managerial implications

While meta-analyses are often conducted to advance theory, the results contribute for developing actionable measures for sport managers. An important implication is the creation and empirical assessment of a framework that managers can use as a blueprint for planning service delivery and reinforce the relationships with consumers. The perceived event value depends on functional and aesthetic quality, cautioning managers against strategies only focused on the core product. As functional quality refers to consumer interactions with frontline employees and facility functions, sport organisations should implement internal mechanisms to guide staff behaviours and continually increase

operational excellence (Hogreve et al., 2017). Also, investments in online platforms to extend the live experience, diversified concession areas, comfort seating, stadium layout and information signs with clear directions, security measures within and outside the facilities, good management of parking and external accessibilities may all contribute to enhancing event value perceptions. Simultaneously, sport organisations should induce different stimuli to create a good stadium atmosphere (Uhrich & Koenigstorfer, 2009) and increase aesthetic quality. This could be achieved, for example, by offering or raffling team merchandise, delivering half-time, pre- and post-game shows, promoting supplementary events with former players and/or coaches, investing in good visual and sound systems, as well as encouraging spectators to take part in the co-creation of the events (e.g. choreographies, supportive chants, social events, contests; Uhrich, 2014).

Another implication pertains to the fact that satisfaction is primarily driven by core product quality and perceived event value. Sport-related attributes are often unpredictable and not under the control of sport managers. However, athletes' effort during games has been frequently acknowledged to be paramount for sport consumers (Yoshida & James, 2010). Therefore, complementarily to the strategies above, the involvement of marketing managers in strategic decisions (Theodorakis et al., 2013) to a certain extent (e.g. promotional campaigns focusing on athletes' commitment to the team, and athlete recruitment policies aligned with team values that go beyond sport-related characteristics) may contribute to alleviate the uncertainty of team performance and favour spectator overall satisfaction. Furthermore, as core product quality does not depend only on home teams (or strong opponents) and brands within the sport environment affect one another (Kunkel et al., 2020), teams and leagues should work together to develop competitive balance strategies.

The effect of overall satisfaction on spectators' behavioural intentions indicates its central role for the development of long-term advantages. To this end, annual satisfaction surveys are pivotal to examine how spectators evaluate past experiences and its future intentions towards the teams. Also, according to the experience-based-norm framework (Kim et al., 2014), consumer experiences may not always be isolated to the focal brand, and include a brand unit, other units of the same brand, other related brands or competitor services. This means that monitoring spectator satisfaction levels across different league teams may provide useful insights on how to strengthen relationships with consumers and create competitive advantages. Similarly, as transaction-specific satisfaction is dynamic and often affect overall satisfaction (Bodet, 2008), periodic assessments of spectator experiences may enable sport managers to improve service delivery and subsequent behavioural intentions.

Furthermore, sport value creation requires interactions between event hosts, spectators and other actors involved in service delivery (Tsotsou, 2016). In this study, the MASEM suggests that sport teams can enhance spectators' value perceptions through superior off-field experiences based on functional and aesthetic quality. Testimonials of current spectators can thus be used in marketing communications. For example, for a satellite fan attending a Real Madrid's game, the experience of interacting with other supporters and staff, visiting the museum, having a nice meal, living the stadium atmosphere, posting pictures on social media or getting team merchandise are all aspects that may contribute to perceived value, while the team's performance represents the cherry on

the top of the cake that makes the experience more satisfying. This meta-analytic study clarifies mixed results in extant research and provides guidance on how live experiences influence spectators' outcomes.

Limitations and future research

There are limitations to meta-analytic approaches that should be acknowledged. First, this meta-analysis is restricted to the constructs for which enough empirical studies are available, and whose effect sizes could be converted to correlation coefficients. While there was no systematic bias in our meta-analysis, additional studies could compare our results with the ones from studies relying on other effect size metrics. For example, actual attendance was not examined as the end point of the framework due to the absence of studies properly conceptualising this measure and lack of information necessary for the calculation of effect sizes. Thus, exploration of metrics derived from sport economics studies (Maladozzo & Villar, 2009) and continued investment in longitudinal examinations of spectators' attendance behaviours are suggested for future research (Funk et al., 2016). This is important because behavioural intentions may not always translate into actual behaviours due to inaccurate predictions or existent constraints (Chandon et al., 2005), and some sport consumption studies have cautioned against common assumptions of the relationship intention-behaviour (Yoshida et al., 2015).

Relatedly, this study did not control the moderator role of spectator identification due to the limited number of studies in which this variable was related to service quality. Nevertheless, team identification may help explaining the complex relationships between service quality and spectators' outcomes (Theodorakis et al., 2009), with the emerging scholarly efforts (e.g. Ma & Kaplanidou, 2020) likely contributing for future opportunities to systematically examine these interactions. Therefore, instead of a complete set of every possible aspect affecting spectatorship experiences and its outcomes, this study should be regarded as a theoretical clarification and empirical examination of service quality in spectator sport and its most common consequences. It is also worth noting that most prior studies used data collected at one single moment, with service quality and spectator outcomes measured simultaneously. This suggests caution when interpreting the meta-analytic results because the relationships may have been inflated by common method variance (Hulland et al., 2018).

Another limitation and research opportunity relate to the fact that the current study only focused on perceptions of service quality, and the affective dimension of sport spectatorship was not directly captured. As noted by Koenig-Lewis et al. (2018), sport events often trigger emotional contagion among spectators, which suggests that the assessment of satisfaction in this emotionally charged context derives from both cognitive (i.e. service quality) and affective (i.e. emotions) evaluations. Thus, future research could meta-analyse cognitive and affective elements of spectator experience and subsequent reactions. Additional studies could also assess how complementary online services (i.e. second screen, apps; Kharouf et al., 2020) may enhance live experiences. A comparison of service quality among spectator and participatory sport would also be fruitful research lines as both contexts have gathered significant research attention (Yoshida, 2017).

In summary, this study aims to clarify prior narratives on how service quality in spectator sport affects consumer outcomes by proposing and testing a meta-analytic

framework that aggregates findings from previous research and exploring boundary conditions. The results indicate that service quality dimensions influence spectators' perceived value, satisfaction and behavioural intentions differently. Functional and aesthetic quality are the key drivers of perceived value. All three service quality dimensions affect satisfaction, with core product quality being the main driver. In turn, service quality dimensions, perceived value and satisfaction influence behavioural intentions, with satisfaction being the strongest driver of spectators' behavioural intentions towards the teams. These meta-analytic findings help clarify the importance of service quality in spectator sport, and its implications should be considered by sport teams.

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